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Date: AUGUST 22, 2005

To: EXAMINER LY, NGHI H.
U.S. PATENT AND TRADEMARK OFFICE

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Client/Matter No.: GP-302117 (2760/58)

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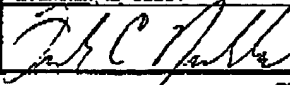
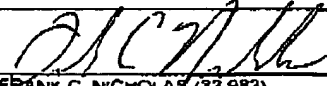
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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Attorney Docket No	GP-302117 (2760/58)
	Application Number	10/077,013
	Filing Date	FEBRUARY 13, 2002
	First Named Inventor	JEFFREY M. STEFAN
	Group Art Unit	2686
	Examiner	LY, NGHI H

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Status Letter <input type="checkbox"/> Petition for Extension of Time Request (dup) <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement, PTO-1449 <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application	<input type="checkbox"/> Assignment Papers <input type="checkbox"/> Drawing Sheets <input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Petition Routing Slip (PTO/SB/68) and Accompanying Petition <input type="checkbox"/> To Convert a Provisional Application <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Small Entity Statement <input type="checkbox"/> Request of Refund	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Brief <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Post Card Receipt <input type="checkbox"/> Additional Enclosure(s) (please identify below) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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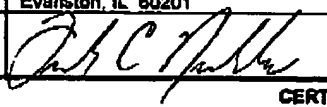
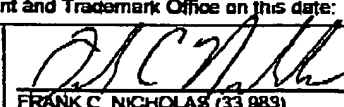
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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Attorney Docket No.	GP-382117 (2780/58)
	Application Number	10/077,013
	Filing Date	FEBRUARY 13, 2002
	First Named Inventor	JEFFREY M. STEFAN
	Group Art Unit	2686
	Examiner	LY, NGHI H

ENCLOSURES (check all that apply)		
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Total		Minus		0	x \$25=	0	x \$50=	
Indep		Minus		0	x \$100=	0	x \$200=	
First Presentation of Multiple Dep. Claim					+ \$180=	—	+ \$360=	
					total add'l fee	\$ 0	total add'l fee	\$ 0

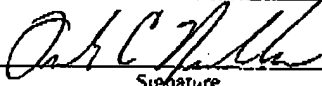
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PATENT
Case No. GP-302117
(2760/58)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re patent application of:

JEFFREY M. STEFAN, ET AL.

Serial No.: 10/077,013

Filed: FEBRUARY 13, 2002

For: METHOD FOR BROADCAST
FILTERING USING CONVEX HULLS

Examiner: LY, NGHI H.

Group Art Unit: 2686

Conf. No.: 1333

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22202-1450

Dear Sir:

Appellants respectfully present their Brief on Appeal as follows:

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Filed: February 13, 2002
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1. REAL PARTY IN INTEREST

The real party in interest is Assignee General Motors Corporation, a corporation having an office and a place of business at 300 Renaissance Center, Detroit, Michigan, 48265-3000.

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2. RELATED APPEALS AND INTERFERENCES

Appellant and the undersigned attorneys are not aware of any appeals or any interferences which will directly affect or be directly affected by or having a bearing on the Board's decision in the pending appeal.

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3. STATUS OF CLAIMS

Claims 1-22 are currently pending in the application and claims 1-3, 7-11, 15-17, 20 and 21 stand finally rejected under 35 U.S.C. §102(e) as anticipated by Wakamatsu, United States Patent 6,819,268 ("Wakamatsu") while claims 4-6, 12-14, 18 and 19 stand finally rejected as unpatentable over Wakamatsu in view of Park, United States Patent 5,627,549 ("Park"). Claim 22 stands finally rejected as unpatentable over Wakamatsu in view of Stewart, United States Patent 6,546,257 ("Stewart"). Claims 1-22 are on appeal. See, the Appendix.

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4. STATUS OF AMENDMENTS

All previously filed amendments have been entered in the application.

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5. SUMMARY OF CLAIMED SUBJECT MATTER

A method of providing information to a mobile vehicle user includes receiving broadcast information at the mobile vehicle, wherein the broadcast information comprises information location coordinate data. The method further determines whether the information location coordinate data resides within a convex hull and presents the broadcast information to the mobile vehicle user based on the determination. See page 15, lines 4-11.

A convex hull 210 is defined as the smallest convex polygon for which each point in the polygon is either on the boundary or in its interior. See, page 10 lines 6-7. Points of the polygon form a set of coordinates representing an area in which a mobile vehicle user often drives. See, page 10 lines 7-9.

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6. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Are claims 1-3, 7-11, 15-17, 20 and 21 anticipated by Wakamatsu under 35 U.S.C.

§102(e)?

Are claims 4-6, 12-14, 18 and 19 unpatentable over Wakamatsu in view of Park under 35

U.S.C. §103(a)?

Is claim 22 unpatentable over Wakamatsu in view of Stewart under 35 U.S.C. §103(a)?

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7. ARGUMENTS

A. Claims 1-3, 7-11, 15-17, 20 and 21 were rejected under 35 U.S.C. §102(e) as anticipated by Wakamatsu

The §102(e) rejection of claims 1-3, 7-11, 15-17, 20 and 21 has been traversed. In order to maintain the §102(e) rejection of claims 1-3, 7-11, 15-17, 20 and 21, each and every element of the claimed invention must be disclosed by the reference in at least as great detail as claimed. Because Wakamatsu does not disclose, at a minimum, "determining whether the information location coordinate data resides within a convex hull" as claimed in claims 1, 9, 17, and 21, the §102(e) rejection must fall to those independent claims, as well as claims 2-3, 7-8, 10-11, 15-16 and 18-20 depending directly or indirectly from claims 1, 9 or 17, respectively.

Wakamatsu does not disclose use of a convex hull, use of a polygon, use of a convex polygon, or even the boundary of a polygon at all. The Examiner's citations to Wakamatsu illustrate the Examiner's misconceptions regarding what a convex hull is and represents.

The Examiner cites the following selection (from column 2) of Wakamatsu as disclosing a convex hull:

30 vehicle detected by the vehicle position detection section. According to this feature, in the course of travel, it is possible to selectively extract for display the information relevant to the area corresponding to the current position of the vehicle.

As disclosed, Wakamatsu relies on the area corresponding to the *current* position of the vehicle. (emphasis added). In contrast, the claimed invention relies on a convex hull. The specification defines a convex hull as the smallest convex polygon for which each point in the polygon is either on the boundary or in its interior. See, specification, page 10, lines 6-7.

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Those of ordinary skill in the art recognize that one customary definition of a "convex hull" is "For a set S in space, the smallest convex set containing S. In the plane, the convex hull can be visualized as the shape assumed by a rubber band that has been stretched around the set S and released to conform as closely as possible to S." See, e.g. the definition of "convex hull" at dictionary.com.

Thus, definition of a convex hull requires multiple points to define the polygon – these points are not the current location of the vehicle, as disclosed by Wakamatsu, but rather represent an area in which a mobile vehicle user often drives. Wakamatsu simply does not disclose use of a convex hull to filter broadcast information. Wakamatsu's disclosed "area" does not read on "convex hull" in contrast to the Examiner's allegations, and one of ordinary skill in the art would readily recognize the differences.

Withdrawal of the rejections to claims 1-3, 7-11, 15-17, 20 and 21 is requested.

B. Claims 4-6, 12-14, 18 and 19 were rejected under 35 U.S.C. §103(a) as unpatentable over Wakamatsu in view of Park

The §103(a) rejections of claims 4-6, 12-14, 18 and 19 are traversed.

Each of claims 4-6, 12-14, 18 and 19 depends directly or indirectly from one of claims 1, 9 and 17, and is therefore patentable over the references for at least the same reasons as above.

In addition, Park does not teach or suggest generating a convex hull from the recorded vehicle location coordinates, as alleged by the Examiner, and claimed. At most, Park teaches creating a data record concerning a single geographic point of interest, corresponding to a current location. Park does not teach collecting data relating to a convex hull, and Wakamatsu does not cure this defect. Therefore, the claims are patentable over the combination of Wakamatsu and Park for at least this additional reason.

Withdrawal of the rejections to claims 4-6, 12-14, 18 and 19 is requested.

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C. Claim 22 was rejected under 35 U.S.C. §103(a) as unpatentable over Wakamatsu in view of Stewart

The §103(a) rejection of claim 22 is traversed.

Claim 22 depends directly from claim 21 and is therefore patentable over the references for at least the same reasons as above.

Additionally, Stewart does not teach or suggest wherein the convex hull is determined in response to a plurality of received and stored longitudinal and latitudinal coordinate positions from the GPS unit, wherein the convex hull represents an area in which a mobile vehicle user often drives. At most, Stewart teaches basing a determination on a repeated travel pattern. Stewart does not disclose use of a convex hull however. Wakamatsu does not cure this defect.

Withdrawal of the rejections to claim 22 is requested.

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CONCLUSION

The Examiner's rejections have been obviated by the above remarks. Appellant respectfully submits that claims 1-22 fully satisfy the requirements of 35 U.S.C. §§ 102, 103 and 112. In view of the foregoing remarks, favorable consideration and passage to issue of the present application are respectfully requested.

Dated: AUGUST 22, 2005

Respectfully submitted,
JEFFREY M. STEFAN, *et al.*

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CLAIMS APPENDIX

1. A method of providing information to a mobile vehicle user comprising:
receiving broadcast information at the mobile vehicle, wherein the broadcast information comprises information location coordinate data;
determining whether the information location coordinate data resides within a convex hull; and
presenting the broadcast information to the mobile vehicle user based on the determination.
2. The method of claim 1 wherein the broadcast information is received from a broadcast service selected from a group consisting of a radio data service, a radio broadcast data service, a satellite broadcast service, a radio broadcast service, and a wireless communications broadcast service.
3. The method of claim 1 wherein the information location coordinate data comprises a longitude and a latitude associated with the broadcast information.
4. The method of claim 1 further comprising:
recording a plurality of vehicle location coordinates; and
generating the convex hull from the recorded vehicle location coordinates.
5. The method of claim 4 further comprising:
updating the convex hull based on a coordinate input.

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6. The method of claim 5 wherein the coordinate input is selected from a group consisting of a current vehicle location coordinate, a previous vehicle location coordinate, a recorded vehicle location coordinate input, a collection period, a collection frequency, a vehicle location coordinate retention period, a global positioning service quality indicator, and a user location coordinate input.

7. The method of claim 1 further comprising:
transferring the broadcast information to a vehicle presentation manager;
rendering the broadcast information with the vehicle presentation manager; and
sending the broadcast information to a presentation device.

8. The method of claim 7 wherein the presentation device is selected from a group consisting of a visual display, an audio device, and an audio-visual display device.

9. A computer usable medium including a program for providing information to a mobile vehicle user comprising:

computer program code to receive broadcast information at the mobile vehicle,
wherein the broadcast information comprises information location coordinate data;

computer program code to determine whether the information location coordinate data resides within a convex hull; and

computer program code to present the broadcast information to the mobile vehicle user based on the determination.

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10. The computer usable medium of claim 9 wherein the broadcast information is received from a broadcast service selected from a group consisting of a radio data service, a radio broadcast data service, a satellite broadcast service, a radio broadcast service, and a wireless communications broadcast service.

11. The computer usable medium of claim 9 wherein the information location coordinate data comprises a longitude and a latitude associated with the broadcast information.

12. The computer usable medium of claim 9 further comprising:
computer program code to record a plurality of vehicle location coordinates; and
computer program code to generate the convex hull from the recorded vehicle location coordinates.

13. The computer usable medium of claim 12 further comprising:
computer program code to update the convex hull based on a coordinate input.

14. The computer usable medium of claim 13 wherein the coordinate input is selected from a group consisting of a current vehicle location coordinate, a previous vehicle location coordinate, a recorded vehicle location coordinate input, a collection period, a collection frequency, a vehicle location coordinate retention period, a global positioning service quality indicator, and a user location coordinate input.

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15. The computer usable medium of claim 9 further comprising:
computer program code to transfer the broadcast information to a vehicle presentation manager;
computer program code to render the broadcast information with the vehicle presentation manager; and
computer program code to send the broadcast information to a presentation device.
16. The computer usable medium of claim 15 wherein the presentation device is selected from a group consisting of a visual display, an audio device, and an audio-visual display device.
17. A system for providing information to a mobile vehicle user comprising:
means for receiving broadcast information at the mobile vehicle, wherein the broadcast information comprises information location coordinate data and at least one data string;
means for determining whether the information location coordinate data resides within a convex hull; and
means for presenting the broadcast information to the mobile vehicle user based on the determination.
18. The system of claim 17 further comprising:
means for recording a plurality of vehicle location coordinates; and
means for generating the convex hull from the recorded vehicle location coordinates.

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19. The system of claim 17 further comprising:
means for updating the convex hull based on a coordinate input.
20. The system of claim 17 further comprising:
means for transferring the broadcast information to a vehicle presentation manager;
means for rendering the broadcast information with the vehicle presentation manager; and
means for sending the broadcast information to a presentation device.
21. A method of providing information to a mobile vehicle user comprising:
receiving broadcast information at the mobile vehicle, wherein the broadcast information comprises information location coordinate data;
determining whether the information location coordinate data resides within a convex hull incorporating data from an in-vehicle GPS; and
presenting the broadcast information to the mobile vehicle user based on the determination.
22. The method of claim 21 wherein the convex hull is determined in response to a plurality of received and stored longitudinal and latitudinal coordinate positions from the GPS unit, wherein the convex hull represents an area in which a mobile vehicle user often drives.

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EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.